

Hazard Communication in the Workplace

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Testimony

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Committee on Health, Education, Labor, and Pensions  
U.S. Senate

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Introduction

Chairman Enzi, Senator Murray, and members of the Subcommittee, thank you for inviting me to testify this morning. My name is Jon Hanson, and I am the Director of Safety at Wyoming Medical Center in Casper, Wyoming. The issue under the subcommittee's consideration this morning will have a significant impact on the future of workplace safety, and it is my honor to appear before you today to help you better understand the issues that I confront daily on the frontlines of hospital risk management.

Before I detail the specific recommendations I have for improving the federal Hazard Communication Standard, I would like to share some personal stories about why I believe these improvements are necessary in the first place. These two stories, together with the expert testimony you will have received by the end of this historic hearing, should provide the evidence necessary for the subcommittee to begin exploring mechanisms for reform.

MSDS: A Recipe for Disaster Part 1

As the safety director at Wyoming Medical Center, I am responsible for managing the inventory, use, and safety applications for approximately 2,500 chemicals. As you know, current law requires me to maintain an archive of material safety data sheets, or MSDSs, for each chemical in my hospital. These sheets were developed to inform me and my fellow hospital employees (including physicians, nurses, cooks – even environmental service workers) of the potential physical and environmental risks, hazards, and threats of each chemical.

These MSDSs vary significantly in length. I have one chemical in my hospital which has an accompanying MSDS from the manufacturer that is one page long. In the other extreme, I have another chemical with an MSDS from the manufacturer that is 65 pages long. All of the 2,500 MSDSs in my hospital fall somewhere between these two in length. This represents more than 20,000 pages of MSDSs, which I had manually archived in 26, four-inch binders.

Now, fast forward to July of 2000 when two gallons of the chemical Xylene spilled in the lab of my hospital. By the time an employee had noticed the spill, the ventilation had already sucked most of the vapors into the HVCA. This, in turn, became suspended in the ceiling tile over our radiology department. Twelve employees were sent to the emergency room. To make the matter worse, the lab employee was frantically searching through the MSDS binder in her area for the Xylene MSDS. Once she found it, she had difficulty locating the spill response section. After notifying our engineering department, she began to clean up the spill with solid waste rags, known for spontaneous combustion, and placing the rags into a clear plastic bag for disposal. She did not know that Xylene has a flash point of 75 degrees Fahrenheit. She then walked the bag down to our incinerator room and left it there, basically creating a live bomb. Twelve people were treated from this exposure. The lab employee was very upset and concerned about the safety of the affected employees and visitors, and hysterically kept stating that she could not find the necessary spill response information.

#### MSDS: A Recipe for Disaster Part 2

The next story is equally as frightening. An industry colleague of mine recently shared his experience with me in conducting HAZMAT and MSDS training on an excavation site for a pipeline company in Colorado. He had no more finished the training when a project engineer noticed several five-gallon buckets placed in the dirt all along the site. The gentleman read the labels on the buckets as he was trained. It read “de-greaser, clear, colorless, odorless standard PH.” He then placed his foot on top of the bucket to give him an extra boost to call his supervisor over to this find. His foot went directly into the top of the bucket, and the substance inside came splashing out. The blue-green substance smelled of ammonia and gelled when it hit the ground. The chemical was indeed a de-greaser, but not the one on the label. It was Monster de-greaser. The facility had extra buckets left over, and used them to store other chemicals to be used on the pipeline at a later time. Because of the inaccuracies in labeling, the employee ended up losing his leg from the knee down.

Mr. Chairman, Wyoming Medical Center is not unique here. Every hospital, healthcare facility, manufacturing plant, and other workplaces that house chemicals has potential victims. What happened to these employees can happen to anybody. And, ironically, the system which was designed to promote chemical safety in the workplace – the MSDS – is actually contributing to the fear that hospital employees endure on a daily basis.

I was asked to come this morning to offer specific recommendations for changing the federal Hazard Communication Standard. With my personal stories as a backdrop, please

consider the following recommendations.

#### Regulatory Treatment of Toxic and Hazardous Substances

Title 29 of the Code of Federal Regulations, 1910.1200 – Subpart Z was written to provide me with clarity on how to do an effective job of managing hazardous material communications. The problem is the section is much too lengthy. Many different sections offer multiple ways to comply with the federal standard. It is a challenge, though not insurmountable, to effectively translate the information in these regulations to ensure my hospital's compliance with federal law. Couple this with the 64 federal and state agencies that have each promulgated regulations governing my department, and you have a bureaucratic maze that is seemingly impossible to navigate. In short, the section is too vague and leaves significant margin for error in interpretation.

I recommend that Congress work with the Occupational Safety and Health Administration (OSHA) to provide workplaces with a clear and specific means for complying with the standard. My job is to ensure the safety of the physical plant and that of the hospital's staff and patients. I should be spending my time on that critical responsibility and not on trying to interpret the technical language in federal regulations.

#### The MSDS Format

As I reported, I have seen MSDSs ranging in length from a single page to 65 pages. Every chemical manufacturer uses different formats to detail the information required by federal law. They are written defensively, with an eye toward litigation, in a language that is too technical for an audience who needs to rely on the ability to act quickly in the case of an incident. I have numerous certifications and accreditations in engineering, safety, and risk management, and even I have a difficult time in interpreting these technical documents. I ask you to consider the outcome of a chemical spill when the hospital's night environmental service crew, with only basic English language skills, happened upon the incident.

I recommend this morning that Congress and OSHA, in concert with industry, work to produce a standardized format for the MSDS in the HAZCOM arena. The new format should be a single page for each chemical. The following could easily be documented on a single sheet in language a 6th grade student could easily understand:

1. Potential hazards (fire or explosion, health)
2. Safety precautions
3. Emergency response (fire, spill)
4. First aid

As an example, an appendix to my testimony includes a 6-page MSDS for the chemical Glutaraldehyde. It also includes a much more succinct version of the MSDS that was developed by a chemical categorization company in Arizona. My hospital has used this version for the past two years, which has created a multitude of efficiencies. I ask, Mr. Chairman, that these be included as part of the hearing record.

### Training on Chemical Safety

In my hospital, our laboratory alone houses more than 800 chemicals and employs more than 40 full time employees. Each of these employees is required to be trained on the safety and potential risks of each of the 800 chemicals before they commence working. In the event there are chemical changes or additions, subsequent training is required. Couple this training requirement with thousands of pages of MSDSs, and chaos ensues.

I recommend that Congress work with OSHA to develop a standardized training program based on chemical categorization. Many toxicologists and chemists agree that each of the more than 2 million chemicals in use today can undoubtedly fall into a much smaller number of specific categories, based on their potential hazards, safety precautions, and emergency responses. Under a category-based training program, less time would be necessary to train staff on these risks and interventions, without compromising the safety that the training is designed to advance. This would enable staff to spend more time doing the jobs they were hired to do, and less time on overly burdensome administration.

As an example, an appendix to my testimony details the chemical categorization program in use at Wyoming Medical Center. We have 2,500 chemicals at my hospital that can fall into every category. Rather than spend time training staff on each of the chemicals, we provide training on the identified categories. We have found this to result in significant cost savings. I ask, Mr. Chairman, that these be included as part of the hearing record as well.

### Impact of HCS Reform on Global Harmonization System

The hearing this morning also provides an opportunity to comment on the Global Harmonization System. As you know, international trade in chemical products brings differences in hazard determination, criteria for defining cutoffs, classifications, as well as language and cultural sensitivities. In 1992, an international effort to develop a globally harmonized system for hazard classification and labeling was adopted at a United Nations conference on Environment and Development. Part of the mandate was a globally harmonized classification and compatible labeling system, including MSDSs and easily understandable symbols, which was to be made available by the year 2000. The United States is a member of the development team, but has not yet committed to the Globally Harmonized System involving OSHA, EPA, Department of Transportation, and many other regulatory agencies.

MSDSs in the United States, as it stands, is no small issue. The original, two-page MSDS has grown to a dozen or more pages. This suggests that substantial proportions of MSDSs today have serious deficiencies.

For example, I recently reviewed two cleaning chemicals at our facility for approval of use. Each chemical, although from different manufacturers, had the exact same chemical ingredients and make up, with the exact same percentages of ingredients used. However, one chemical was listed as having a health hazard of three while the other a health hazard of one. This inadequacy and inefficiency is among the current public health problems

Congress should work to address.

## Conclusion

Mr. Chairman, the federal effort to strengthen the standards for workplace safety more than two decades ago should be applauded. The pioneering work of OSHA in this regard should be recognized. But 20 years have passed since these regulations were published, and it is now time to harness the power of technology to advance workplace safety once and for all. The current paper-based system has run its course, and desperately needs to be updated. The current MSDS model is antiquated and archaic. We are suffocating under the countless reams of paper that are causing more problems than solutions. A majority of the MSDSs in use today are inaccurate, and there is no standard for how the embedded information is relayed from the manufacturers to the workplace. Information included in these documents is written in a language that would stretch even an engineer's capacity to interpret them.

Given these liabilities, I strongly urge you to remove the complexity from the Hazard Communication System by developing a national framework for hazard determination, employee training, and the preparation of chemical-related documents.

Thank you for inviting me to testify, and I would be happy to answer any questions.

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